

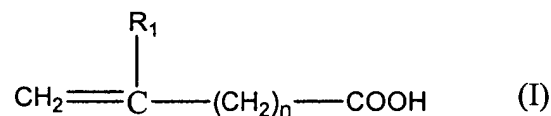
AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Claims 1-23 (canceled)

24. (Currently Amended) A process for preparing an electrical cable comprising at least one conductor and at least one layer of extruded insulating coating, comprising:

a) coating, by extrusion, the conductor with a polymeric composition comprising a polyethylene, a radical initiator and at least one unsaturated carboxylic acid of general formula (I) in free form:



in which:

R₁ represents H or CH₃;

n represents 0 or 1;

said unsaturated carboxylic acid being present in an amount of between 0.0006% and 0.25% by weight, said amount being expressed as the weight content of -COOH groups relative to the total weight of the polymeric composition; and

b) heating the conductor thus coated so as to obtain cross-linking of said polymeric composition.

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25. (Previously Presented) A process according to claim 24, wherein the unsaturated carboxylic acid of general formula (I) is present in an amount of between 0.02% and 0.15% by weight, said amount being expressed as the weight content of -COOH groups relative to the total weight of the polymeric composition.

26. (Previously Presented) A process according to claim 24, wherein the radical initiator is present in an amount of between 0.5 and 5 parts by weight per 100 parts by weight of the polymeric composition.

27. (Previously Presented) A process according to claim 26, wherein the radical initiator is present in an amount of between 1.5 and 3 parts by weight per 100 parts by weight of the polymeric composition.

28. (Previously Presented) A process according to claim 24, wherein the unsaturated carboxylic acid of general formula (I) is added to the polyethylene in the form of granules.

29. (Previously Presented) A process according to claim 24, wherein the unsaturated carboxylic acid of general formula (I) is mixed with the polyethylene directly in an extruder cylinder.

30. (Previously Presented) A process according to claim 24, wherein the polyethylene is an ethylene homopolymer or a copolymer of ethylene with at least one α -olefin having a density of between 0.860 g/cm³ and 0.940 g/cm³.

31. (Previously Presented) A process according to claim 30, wherein the α -olefin is an olefin of general formula CH₂=CH-R in which R represents a linear or branched alkyl group containing from 1 to 10 carbon atoms.

32. (Previously Presented) A process according to claim 31, wherein the α -olefin is chosen from propylene, 1-butene, 1-pentene, 4-methyl-1-pentene, 1-hexene, 1-octene or 1-dodecene.

33. (Previously Presented) A process according to claim 24, wherein the polyethylene is chosen from medium density polyethylene having a density of between 0.926 g/cm^3 and 0.940 g/cm^3 ; low density polyethylene or linear low density polyethylene having a density of between 0.910 g/cm^3 and 0.926 g/cm^3 .

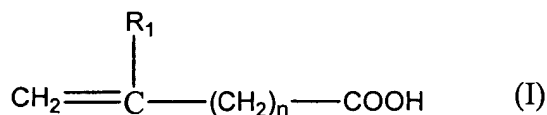
34. (Previously Presented) A process according to claim 24, wherein the radical initiator is an organic peroxide.

35. (Previously Presented) A process according to claim 34, wherein the organic peroxide is chosen from dicumyl peroxide, t-butylcumyl peroxide, 2,5-dimethyl-2,5-di (t-butyl-peroxy) hexane or di-t-butyl peroxide.

36. (Previously Presented) A process according to claim 34, wherein the unsaturated carboxylic acid of general formula (I) is chosen from acrylic acid or vinyl acetic acid.

37. (Previously Presented) A process according to claim 36, wherein the unsaturated carboxylic acid of general formula (I) is acrylic acid.

38. (Currently Amended) An electrical cable comprising at least one conductor and at least one extruded insulating coating layer consisting of a polymeric composition comprising a polyethylene grafted with at least one unsaturated carboxylic acid of general formula (I):



in which:

R_1 represents H or CH_3 ;

n represents 0 or 1;

said grafted polyethylene being derived from polyethylene, a radical initiator and at least one unsaturated carboxylic acid of general formula (I) in free form; and

said unsaturated carboxylic acid being present in an amount of between 0.0006% and 0.25% by weight, said amount being expressed as the weight content of -COOH groups relative to the total weight of the polymeric composition.

39. (Previously Presented) An electrical cable according to claim 38, wherein the polyethylene is an ethylene homopolymer or a copolymer of ethylene with at least one α -olefin having a density of between 0.860 g/cm^3 and 0.940 g/cm^3 .

40. (Previously Presented) An electrical cable according to claim 39, wherein the α -olefin is an olefin of general formula $CH_2=CH-R$ in which R represents a linear or branched alkyl group containing from 1 to 10 carbon atoms.

41. (Previously Presented) An electrical cable according to claim 40, wherein the α -olefin is chosen from propylene, 1-butene, 1-pentene, 4-methyl-1-pentene, 1-hexene, 1-octene or 1-dodecene.

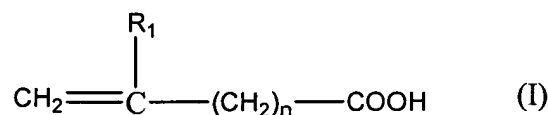
42. (Previously Presented) An electrical cable according to claim 38, wherein the polyethylene is chosen from medium density polyethylene having a density of between 0.926 g/cm^3 and 0.940 g/cm^3 ; low density polyethylene or linear low density polyethylene having a density of between 0.910 g/cm^3 and 0.926 g/cm^3 .

Claims 43-44 (Canceled).

45. (Previously Presented) An electrical cable according to claim 38, wherein the unsaturated carboxylic acid of general formula (I) is chosen from acrylic acid or vinyl acetic acid.

46. (Previously Presented) An electrical cable according to claim 45, wherein the unsaturated carboxylic acid of general formula (I) is acrylic acid.

47. (Currently Amended) A polymeric composition comprising a polyethylene, a radical initiator and at least one unsaturated carboxylic acid of general formula (I) in free form:



in which:

R₁ represents H or CH₃;

[(N)]_n represents 0 or 1;

said unsaturated carboxylic acid being present in an amount of between 0.0006% and 0.25% by weight, said amount being expressed as the weight content of -COOH groups relative to the total weight of the polymeric composition.

48. (Previously Presented) A polymeric composition according to claim 47, wherein the polyethylene is an ethylene homopolymer or a copolymer of ethylene with at least one α-olefin having a density of between 0.860 g/cm³ and 0.940 g/cm³.

49. (Previously Presented) A polymeric composition according to claim 48, wherein the α-olefin is an olefin of general formula CH₂=CH-R in which R represents a linear or branched alkyl group containing from 1 to 10 carbon atoms.

50. (Previously Presented) A polymeric composition according to claim 49, wherein the α -olefin is chosen from propylene, 1-butene, 1-pentene, 4-methyl-1-pentene, 1-hexene, 1-octene or 1-dodecene.

51. (Previously Presented) A polymeric composition according to claim 47, wherein the polyethylene is chosen from medium density polyethylene having a density of between 0.926 g/cm^3 and 0.940 g/cm^3 ; low density polyethylene or linear low density polyethylene having a density of between 0.910 g/cm^3 and 0.926 g/cm^3 .

52. (Previously Presented) A polymeric composition according to claim 47, wherein the radical initiator is an organic peroxide.

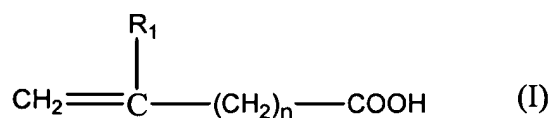
53. (Previously Presented) A polymeric composition according to claim 52, wherein the organic peroxide is chosen from dicumyl peroxide, t-butylcumyl peroxide, 2,5-dimethyl-2,5-di(t-butyl-peroxy)hexane or di-t-butyl peroxide.

54. (Previously Presented) A polymeric composition according to claim 47, wherein the unsaturated carboxylic acid of general formula (I) is chosen from acrylic acid or vinyl acetic acid.

55. (Previously Presented) A polymeric composition according to claim 54, wherein the unsaturated carboxylic acid of general formula (I) is acrylic acid.

56. (Previously Presented) An electric cable made by the process comprising:

a) coating at least one conductor, by extrusion, with at least one layer of extruded insulating coating of a polymeric composition comprising a polyethylene, a radical initiator and at least one unsaturated carboxylic acid of general formula (I) in free form:



in which:

R₁ represents H or CH₃;

n represents 0 or 1;

said unsaturated carboxylic acid being present in an amount of between 0.0006% and 0.25% by weight, said amount being expressed as the weight content of -COOH groups relative to the total weight of the polymeric composition; and

b) heating the conductor thus coated so as to obtain cross-linking of said polymeric composition.

57. (Previously Presented) An electric cable made by the process of claim 56, further comprising mixing the unsaturated carboxylic acid of general formula (I) with the polyethylene directly in the extruder cylinder.